# MOBILE AIR CLEANER - MAC 700

1. Install Nailor mobile air cleaner – MAC 700 Units where indicated on the plans and in the specifications.
2. All units shall be factory assembled, tested and shipped as one piece.
3. Mobile Air Cleaner
	1. Basis of Design: Nailor Industries
	2. Mobile Air Cleaner: MAC 700
4. Construction:
	1. Plenum: all unit chassis shall be fabricated of heavy gauge galvanized steel panels
		1. Blower, HEPA and Pre-filter decks, top slopped panel, bottom return, and door shall be made of 18 gauge
		2. Wrapper shall be made of 20 gauge
	2. Top grille: Double deflection grill shall be made of Aluminum
	3. Bottom grille: Eggcrate shall be made of Aluminum
	4. Casters: Each unit shall have 4- 360-degree casters with 4 lock nuts-factory installed
	5. Door shall feature two (2) tamper-proof door latches and two (2) pull tabs for easy opening
	6. Each unit shall have two (2) door keys- Shipped with unit
	7. Each unit shall feature four (4) HEPA filter and Pre-filter clips to hold the HEPA and Pre-filters in place and prevent leakage of unfiltered air
	8. Handles:
		1. Unit shall feature two plastic handles on the back for easy moving
5. Filters
	1. HEPA Filter
		1. HEPA filter shall provide 99.99% efficiency at 0.3-micron particle with an initial pressure drop of 0.79” w.g. at 175 fpm.
		2. HEPA filter shall be framed in 18- gauge galvanized metal with ¼” thick gasket applied on the frame
		3. HEPA filter media shall be water- resistance inorganic glass microfiber
		4. HEPA filter depth shall be 6”
		5. HEPA filter shall be UL 900 classified
	2. Pre- Filter
		1. Unit shall be provided with 1” nominal glass fiber throwaway filter. Filters shall be tight fitting to prevent air bypass
		2. Pre-filter shall provide 50-64.9% MERV 10 efficiency with an initial pressure drop of 0.2” w.g. at 300 fpm.
6. Plenum Finish
	1. All galvanized components shall have Appliance White powder coat finish.
	2. The paint film thickness shall be a minimum of 2.5 mils
	3. The finish shall withstand a minimum salt spray exposure of 1000 hours
	4. The finish shall have an impact resistance of 80 in-lb.
	5. The finish shall have a hardness of 2H.
7. Motor:
	1. Fan motor shall be an ECM, Electronic Commutated Motors, constant torque -program and run-tested in assembled units with fully variable speeds.
	2. Motors shall be high efficiency, permanently lubricated sleeve bearings. Single speed motors are not acceptable.
	3. Motors can be operated at the established range of airflows with a factory supplied variable speed controller.
	4. Fan motor shall have internal thermal and overload protection with a maximum ambient operating temperature of 104°F.
8. Blower
	1. Forward inclined blower- metal construction
9. Speed controller
	1. The ECM speed controller shall provide variable speed control of EC motor via 0-10 VDC input.
	2. The ECM speed controller shall operate on 24 VAC supply voltage.
	3. The ECM speed controller shall be supplied with an integral heat sink/mounting plate.
10. Ultraviolet Light (Option)
	1. Each unit shall provide 99.9% Coronavirus inactivation rate through two (2)-20” UV lights at max airflow (700 CFM)
	2. UV lights shall provide 9000 hours of continues operation
	3. Fixture assembly to be installed at the blower discharge (upstream of the HEPA filter)
11. Hour meter (Option)
	1. Each unit shall feature an hour meter that displays unit total run time
	2. Hour meter shall be visible from the occupied area to show the number of hours without opening the door
	3. Each unit shall feature a push button to reset the hour meter when UV lamps are replaced.
12. Loaded filter Indicator (Option)
	1. The LED indicator light shall be visible from the occupied area
	2. The LED kit shall be provided with a pressure switch, factory pre-calibrated for 150% of initial clean filter pressure drop.
	3. The LED light shall turn to red when the pressure drop across the filter exceeds the specified limit
	4. The LED kit shall operate on a 24 VAC supply voltage
13. Safety door switch
	1. To protect maintenance personnel, all units shall be provided with a door interlock safety switch for disconnecting of power to the motor and de-energizing UV lamps when door is opened
14. Insulation-Sound Reduction
	1. All panels surrounding HEPA filter shall be acoustically insulated with 0.5” Melamine insulation
	2. All panels surrounding motor and blower discharge shall be acoustically insulated with ¾” fiber glass insulation and covered by 13% perforated metal.

Electrical

* + 1. All units shall be furnished with a hinged door starter-control enclosure and wired single point power connection.
		2. All power and control wiring shall conform to National Electric Code Standards.
		3. Unit shall be provided with a 20ft SJOOW power cord for use with 115 V power supply
		4. 120-24 VAC transformer shall be included for unit operation.